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Amendments to the Specification

Please amend the paragraphs at page 1, lines 5-15, in the following manner:

Technical Field of the Invention

~~The present invention~~ This disclosure generally relates to a signal transmitting apparatus for multiplexing a plurality of digital signals and sending and receiving the plurality of digital signals through a single signal line, a power supplying system for conducting each of controls of actuating and stopping a plurality of power supplying devices, an output voltage, an output current, and operation modes of the plurality of power supplying devices through a communication part, and a serial communication apparatus for conducting a serial communication, especially by a half-duplex communication.

Please amend the paragraphs at page 9, lines 5 through page 12, lines 22, in the following manner:

Summary of the Invention

~~It is a general object of the present invention to provide~~ In an aspect of this disclosure, there is provided a signal transmitting apparatus for multiplexing a plurality of digital signals and sending and receiving the plurality of digital signals through a single signal line, a power supplying system for conducting each of controls of actuating and stopping a plurality of power supplying devices, an output voltage, an output current, and operation modes of the plurality of power supplying devices through a communication part, and a serial communication apparatus for conducting a serial communication, especially by a half-duplex communication, in which the above-mentioned problems are eliminated.

~~A more specific object of the present invention is to provide the~~ In another aspect of this disclosure, there is provided a signal transmitting apparatus for transmitting a plurality of data sets by a single signal line without a parallel-serial conversion at a sending part and a serial-parallel conversion at a receiving part.

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~~Another object of the present invention is to provide the~~ In another aspect of this disclosure, there is provided a power supplying system that can reduce an increase of the number of signal lines connecting a controlling part and a power supplying part even if the number of the power supplying parts is increased and an amount of information to send and receive between the power supplying parts and the controlling part.

~~Still another object of the present invention is to provide the~~ In another aspect of this disclosure, there is provided a serial communication apparatus, which is minimized and realized by less expense in that a synchronous signal is not needed, each of a sending circuit and a receiving circuit at a host side and a slave side can be realized by a simple circuit configuration, a circuit load at the slave side can be reduced, and a switching part for switching between the sending circuit and the receiving circuit is not needed.

~~The above objects of the present invention are achieved by~~ In another aspect of this disclosure, there is provided a signal transmitting apparatus for sending and receiving a plurality of digital input signals input to the signal transmitting apparatus through a single signal line, the signal transmitting apparatus including: a sending part for converting each width of the plurality of digital input signals into a voltage in accordance with a predetermined weight, generating a send signal by adding voltages converted from the plurality of digital input signals, and outputting the send signal; and a receiving part for receiving the send signal from the sending part, comparing the send signal with a plurality of predetermined voltages, generating each of the digital input signals, and outputting the each of the digital input signals.

~~The above objects of the present invention are achieved by~~ In another aspect of this disclosure, there is provided a power supplying system for supplying a power from a plurality of power supplying devices to each of a plurality of loads, the power supplying system including: a first power supplying device including a first power supplying part for supplying a power to at least one of the plurality of loads, a controlling part for conducting an operation control of the first power supplying part, and a first communicating part for sending and receiving a signal to and from the

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controlling part; and at least one second power supplying device including a second power supplying part for supplying a power to at least one of the plurality of loads, and a second communicating part for sending and receiving a signal to and from the second power supplying part, wherein the first communicating part and the second communicating part send and receive signals each other, and the controlling part conducts the operation control of the second power supplying part through the first communicating part and the second communicating part.

~~The above objects of the present invention are achieved by~~ In another aspect of this disclosure, there is provided a power supplying system for supplying a power from a plurality of power supplying devices to each of a plurality of loads, the power supplying system including: a first power supplying device including a first power supplying part for supplying a power to at least one of the plurality of loads, a controlling part for conducting an operation control of the first power supplying part, and a first communicating part for sending and receiving a signal to and from the controlling part; and at least one second power supplying device including a second power supplying part for supplying a power to at least one of the plurality of loads, and a second communicating part for sending and receiving a signal to and from the second power supplying part, wherein the first communicating part and the second communicating part send and receive signals each other, and the controlling part conducts the operation control of the second power supplying part through the first communicating part and the second communicating part.

~~The above objects of the present invention are achieved by~~ In another aspect of this disclosure, there is provided a serial communication apparatus for conducting a serial communication by a half-duplex communication between a first sending/receiving circuit and a second sending/receiving circuit in that at least one first sending/receiving circuit is connected to at least one second sending/receiving circuit through a transmission channel, wherein each of the first sending/receiving circuit and the second sending/receiving circuit includes: a sending circuit part for generating a serial data signal by superimposing a predetermined superimposing pulse over a send data signal having two values during a predetermined signal level, and

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outputting the serial data signal; and a receiving circuit part for receiving the serial data signal sent from the sending circuit part, and extracting the send data signal by extracting the superimposing pulse from the serial data signal.

Please amend the paragraph bridging pages 12 and 13, in the following manner:

Other ~~objects~~ aspects, features, and advantages ~~of the present invention~~ will become more apparent from the following detailed description when read in conjunction with the accompanying drawings, in which:

Please amend the paragraph at page 17, lines 10-19, in the following manner:

In FIG. 9, a signal transmitting apparatus 1 includes a sending part 2 ~~for converting which converts~~ amplitude of ~~[[a]]~~ digital input signals A_i and B_i input to the signal transmitting apparatus 1 into ~~[[each]]~~ corresponding voltage in accordance with a predetermined weight, and ~~for generating and outputting~~ generates and outputs a send signal S_o1 by adding each voltage converted from amplitude, and a receiving part 3 for receiving the send signal S_o1 from the sending part 2 through a signal line 5, for comparing the send signal S_o1 with each of predetermined reference voltages V_{t1} through V_{t3} , and for generating and outputting digital input signals A_i and B_i based on a comparison result.

Please amend the paragraph bridging pages 22 and 23, in the following manner:

As described above, in the signal transmitting apparatus 1, the sending part 2 converts amplitude of the digital input signals A_i and B_i into a voltage in accordance with a predetermined weight [such as R_3/R_1 in formula (1)], adds all converted voltages, generates different predetermined voltages V_1 through V_4 , respectively, and transmits a signal to the receiving part 3. The receiving part 3 conducts a voltage comparison for the signal received from the sending part 2 by using the predetermined reference voltages V_{t1} through V_{t3} , generates the output signal A_o being the same as the digital input signal A_i and the output signal B_o being the same

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as the digital input signal Bi from the comparison result, and outputs the output signal Ao and the output signal Bo. Accordingly, it is possible to reproduce all digital input signals at the same time. Since the delay by the conventional serial-parallel conversion is eliminated, it is possible to conduct a signal process at higher speed.